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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,019	04/07/2004	Nam T. Chao	101896-0245	3018
21125	7590	10/05/2005	EXAMINER	
NUTTER MCCLENNEN & FISH LLP WORLD TRADE CENTER WEST 155 SEAPORT BOULEVARD BOSTON, MA 02210-2604			REIMERS, ANNETTE R	
			ART UNIT	PAPER NUMBER
			3732	

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,019	CHAO ET AL.	
	Examiner	Art Unit	
	Annette R. Reimers	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005 and 22 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 7, 14, 30, 35 and 41-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10, 13, 15-29, 31-34 and 36-40 is/are rejected.
- 7) ☒ Claim(s) 11, 12 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/09/05, 07/25/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group 1, claims 1-40, and Species I, Figures 1A-3B in the reply filed on July 22, 2005 is acknowledged.

Examiner further acknowledges that applicant believes that claims 1-6, 8-13, 15-34 and 36-40 read on the elected species, Figures 1A-3B. Examiner agrees with applicant regarding all of the claims, except claim 30, Figures 1A-3B do not appear to include a central portion including a bend zone formed at a substantial mid-point.

Claims 7, 14, 30, 35 and 41-50 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 22, 2005.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 8-9, 13, 15-16, 18-22, 24-29, 31-32, 34, 36-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Nichols et al. (U.S. Patent Publication Number 2002/0052603).

Nichols et al. discloses an implantable spinal cross-connector, 20, comprising a central portion with at least one connector member formed on a terminal end thereof the at least one connector member, 44, having first and second opposed jaws, 44a and 44b, adapted to seat a spinal rod therebetween, wherein at least one of the jaws being selectively movable between a first, open position wherein the first and second jaws are positioned a distance apart from one another and a second closed position wherein the first and second jaws are adapted to engage a spinal fixation element therebetween, and at least one of the jaws, 44b, is integrally formed with the central portion and a locking mechanism, 50, having a shank that is receivable within a non-expandable bore, 48, formed in the connector member, the locking mechanism being adapted to come into contact with each of the first and second jaws to selectively lock at least one of the first and second jaws in a fixed position (see figures 3 and 13)

The locking mechanism includes a non-eccentric head formed on a proximal end of the shaft (see figure 13). The non-expandable bore formed in the at least one connector member includes an enlarged proximal opening that is adapted to seat a non-eccentric head of the locking mechanism (see figure 13). The second jaw, 44a, on the at least one connector member is pivotally mated to the first jaw, and wherein the non-eccentric head of the locking mechanism is effective to move the second jaw from the open position to the closed position when the head is disposed within the enlarged

proximal opening of the non-expandable bore (see figure 3 and paragraph 0046). In addition, the locking mechanism is adapted to pull the first and second jaws toward one another into the second closed position when the locking mechanism is advanced into the non-expandable bore (see figure 3 and paragraph 0046). The first and second jaws define a substantially C-shaped recess therebetween (see figure 3). The first and second jaws include a slot formed therebetween and adapted to allow movement of the first and second jaws between the first open position and the second closed position (see figure 3 and 13).

The central portion comprises a substantially elongate member having an adjustable length (see figure 3). The substantially elongate member is formed from first and second transverse members, 22 and 24, that are slidably matable to one another (see figure 3). The first transverse member, 24, includes a female mating element and the second transverse member, 22, includes a male mating element that is adapted to be received by the female mating element (see figure 3). A central locking mechanism, 28, for locking the first and second transverse members at a fixed position with respect to one another. In addition, the first and second transverse members are angularly adjustable with respect to one another along the longitudinal axis of the spinal cross-connector (see figure 11).

The central portion includes first and second transverse members that are connected to one another by a central clamp, 36a and 36b that allows angular adjustment of the first and second transverse members with respect to one another along a longitudinal axis of the spinal cross-connector. In addition, the central locking

mechanism is formed in the central clamp for locking the first and second transverse members in a fixed position with respect to one another (see figures 12 and 13).

The central locking mechanism extends through the central clamp and each of the first and second transverse members is adapted to engage and close the central clamp, thereby locking the first and second transverse members therebetween (see figures 12 and 13). The at least one connector member includes a bend zone formed between the connector member and the central portion to allow angular movement of the connector member with respect to the central portion (see figure 13).

Claims 1-4, 6, 8-10, 13, 15-16, 18-22, 23-28, 31-32, 34, 36-39 are rejected under 35 U.S.C. 102(e) as being anticipated by Berrevoets et al. (U.S. Patent Publication Number 2005/0090821).

Berrevoets et al. discloses an implantable spinal cross-connector, 12, comprising a central portion with at least one connector member formed on a terminal end thereof the at least one connector member, 20, having first and second opposed jaws, 40 and 50, adapted to seat a spinal rod therebetween, wherein at least one of the jaws being selectively movable between a first, open position wherein the first and second jaws are positioned a distance apart from one another and a second closed position wherein the first and second jaws are adapted to engage a spinal fixation element therebetween, and at least one of the jaws, 40, is integrally formed with the central portion and a locking mechanism, 60, having a shank that is receivable within a non-expandable bore, 80, formed in the connector member, the locking mechanism being adapted to come

into contact with each of the first and second jaws to selectively lock at least one of the first and second jaws in a fixed position (see figures 1 and 2).

The locking mechanism includes a non-eccentric head, 64, formed on a proximal end of the shaft (see figure 1). The non-expandable bore formed in the at least one connector member includes an enlarged proximal opening that is adapted to seat a non-eccentric head of the locking mechanism (see figure 1). The second jaw, 50, on the at least one connector member is pivotally mated to the first jaw, and wherein the non-eccentric head of the locking mechanism is effective to move the second jaw from the open position to the closed position when the head is disposed within the enlarged proximal opening of the non-expandable bore (see figure 1 and paragraph 0043). In addition, the locking mechanism is adapted to pull the first and second jaws toward one another into the second closed position when the locking mechanism is advanced into the non-expandable bore (see figure 3 and paragraph 0043). The first and second jaws define a substantially C-shaped recess therebetween (see figure 1).

Furthermore the first and second jaws include a slot, 110, formed therebetween and adapted to allow movement of the first and second jaws between the first open position and the second closed position (see figure 1 and 2). The non-expandable bore extends through the first and second jaws across the slot such that the locking mechanism is effective to close the slot when the locking mechanism is advanced into the non-expandable bore, thereby moving the first and second jaws from the first open position to the second, closed position (see figure 1).

The central portion comprises a substantially elongate member having an adjustable length (see figure 2). The substantially elongate member is formed from first and second transverse members, 220 and 232, that are slidably matable to one another (see figure 2). The first transverse member, 220, includes a female mating element and the second transverse member, 232, includes a male mating element that is adapted to be received by the female mating element (see figure 12). A central locking mechanism, 250 and 239, for locking the first and second transverse members at a fixed position with respect to one another (see figure 2). In addition, the first and second transverse members are angularly adjustable with respect to one another along the longitudinal axis of the spinal cross-connector (see figures 16 and 17). Furthermore, the first and second transverse members can be positioned at an angle of about 20 degrees with respect to the longitudinal axis of the spinal cross-connector (see paragraph 0067).

The central portion includes first and second transverse members that are connected to one another by a central clamp, 240, that allows angular adjustment of the first and second transverse members with respect to one another along a longitudinal axis of the spinal cross-connector. In addition, the central locking mechanism is formed in the central clamp for locking the first and second transverse members in a fixed position with respect to one another (see figures 16 and 17).

The central locking mechanism extends through the central clamp and each of the first and second transverse members is adapted to engage and close the central clamp, thereby locking the first and second transverse members therebetween (see figures 12, 16 and 17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 17 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols et al. (U.S. Patent Publication Number 2002/0052603).

Nichols et al. discloses the claimed invention except for the shank on the locking mechanism and the non-expandable bore including complementary threads and the clamping surface of the jaw members comprising a series of ridges device. It would have been an obvious matter of design choice to one skilled in the art at the time the invention was made to construct the device of Nichols et al. with the shank on the locking mechanism and the non-expandable bore including complementary threads, and the clamping surface of the jaw members comprising a series of ridges device, since applicant has not disclosed that the shank on the locking mechanism and the non-expandable bore including complementary threads, and the clamping surface of the jaw members comprising a series of ridges solves any stated problem or is anything more than one of numerous shapes or configurations a person ordinary skill in the art would find obvious for the purpose of providing a more secure form of screwing an object into a hole and for clamping an object. In re Dailey and Eilers, 149 USPQ 47 (1966). In addition, it appears that the invention would perform equally well with the shank on the

expandable bore not including complementary threads, and the clamping surface of the jaw members not comprising a series of ridges device

Claims 5, 17 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berrevoets et al. (U.S. Patent Publication Number 2005/0090821).

Berrevoets et al. discloses the claimed invention except for the shank on the locking mechanism and the non-expandable bore including complementary threads and the clamping surface of the jaw members comprising a series of ridges device. It would have been an obvious matter of design choice to one skilled in the art at the time the invention was made to construct the device of Berrevoets et al. with the shank on the locking mechanism and the non-expandable bore including complementary threads, and the clamping surface of the jaw members comprising a series of ridges device, since applicant has not disclosed that the shank on the locking mechanism and the non-expandable bore including complementary threads, and the clamping surface of the jaw members comprising a series of ridges solves any stated problem or is anything more than one of numerous shapes or configurations a person ordinary skill in the art would find obvious for the purpose of providing a forming edge in the heating portion or clamp. In re Dailey and Eilers, 149 USPQ 47 (1966). In addition, it appears that the invention would perform equally well with the shank on the locking mechanism and the non-expandable bore not including complementary threads, and the clamping surface of the jaw members not comprising a series of ridges device

Allowable Subject Matter

Claims 11, 12 and 40 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-50 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892 for art cited of interest.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette R. Reimers whose telephone number is (571) 272-7135. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AR
NR



EDUARDO C. ROBERT
PRIMARY EXAMINER